UTAH DEPARTMENT OF TRANSPORTATION

TECHNICAL BULLETIN MT-05.01
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Epoxy Coated Steel

To maximize corrosion protection in completed reinforced concrete structures, recommended practices for field handling, inspection and repair of epoxy-coated reinforcing steel on the job site is necessary.

Pre-Qualification: Epoxy coated steel used on UDOT projects are required to be from pre-qualified suppliers. Suppliers are qualified through the Reinforcing Steel Epoxy Coating Quality Management Plan. The steel used by epoxy coaters, also needs to come from a pre-qualified reinforcing steel supplier, following the Reinforcing Steel Quality Management Plan. These plans are managed and maintained by UDOT Central Materials Lab. A listing of qualified suppliers can be found at:
http://www.dot.state.ut.us/index.php/m=c/tid=417

Acceptance Procedures: Before each shipment to a UDOT project, an epoxy-coating supplier faxes to central lab a certificate of compliance for the shipment as well as mill test reports for each heat number included in the shipment, (obtained from the reinforcing steel supplier). The mill test report data is entered into central lab's database, which randomly selects one in five heat numbers per supplier to be tested. Central lab faxes back to the coating supplier, prior to shipment, a reinforcing steel report, which includes heat numbers, test results, quantities and sizes of the bars being shipped as well as project information. This document along with the certificate of compliance from the epoxy coater should arrive with the coated bars on the project site. Epoxy coated reinforcing steel that arrives without this documentation should not be accepted. Once the material is on site a visual inspection is required by specification. To ensure proper quality, care should be taken while unloading along with job site handling. Things to watch when a shipment is being unloaded, stored and placed, include the following: Do not allow bundles to slide or skid from the truck bed to the ground. Ensure that power lift equipment is used and protected nylon slings or padded wire rope slings are used when lifting or moving bundles. Bundles should be lifted at multiple pick-up points or a spreader bar used with additional nylon straps to prevent sages and bar-to-bar abrasion in longer bundles. Ensure bundles are stored above the ground on timbers or other suitable protective cribbing, and that the spacing of support cribbing is close enough to prevent excessive sagging. Do not allow coated bars to be dragged across the ground or deck and minimize walking on epoxy-coated bars. Inspect bars after placement, for damage and properly repair all damaged bars.

FURTHER INFORMATION

Concrete Reinforcing Steel Institute
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